

— Pronotum not punctured, smooth and shining, mandible with 3 teeth *smythiesii* Forel

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THRESIAMMA VARGHESE
Centre for Ecological Sciences,
Indian Institute of Science,
Bangalore 560 012,
Karnataka, India.
Email: thresi@ces.iisc.ernet.in

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24. ON THE OCCURRENCE OF *MARUMBA CRISTATA* (BUTLER 1875), LEPIDOPTERA: SPHINGIDAE, IN SHIMLA, HIMACHAL PRADESH

In an earlier paper on the Hawkmoths (Sphingidae) of the Kumaon Himalaya (Smetacek 1994), *Marumba cristata* (Butler) was noted as a new record for the area. Prior to that study, D'Abrera (1986), Bell and Scott (1937) and Hampson (1892) had recorded this moth from Sikkim eastwards, with a global distribution extending to "China, Taiwan, Peninsular Malaya, Sumatra, Borneo, ?Java and ?Palawan" (D'Abrera 1986). Along this range the latter author recognized four subspecies.

Bell and Scott (1937) bred a large number of Hawkmoths in India. One of the sites where this work was carried out was Mussoorie and the Dun valley in the Garhwal Himalaya prior to 1937. They did not obtain *M. cristata* in that area, nor did the earlier collectors, such as Rev. J.H. Hocking, Mr. Graham-Young, Majors Yerbury and Harford in Garhwal and present day Himachal Pradesh. In the Himalaya west of Nepal, Mussoorie, Shimla, Kulu and Dharamsala were by far the best worked localities for moths, with fewer records from other localities such as Almora, Nainital, Dalhousie and Murree. Major Harford, in particular, collected Hawkmoths in Shimla but did not record *M. cristata* there, although he obtained rarities such as *Thaumoecha uniformis* Butler and *Langia zenzeroides* Moore.

In a paper on the Hawkmoths of Kumaon (Smetacek 1994), I suggested that this moth might have extended its range to Kumaon in the period subsequent

to Bell and Scott's (1937) study. However, since Kumaon is east of the localities surveyed in the previous studies mentioned above, there was a possibility that *M. cristata* had been established in Kumaon for centuries, as a detailed study of the moth fauna of this area had not been undertaken earlier. The confirmation of the possibility of *cristata*'s recent range extension, obviously, would lie in its appearance in localities surveyed in the second half of the 19th and first half of the 20th centuries.

On July 17, 1993, I found the right forewing of a specimen of *Marumba cristata* (4.1 cm long) on a hotel balcony on the western outskirts of Shimla town. The moth had evidently been attracted by the outdoor lights, which had been left on all night, and had fallen prey to a bird or gecko there. The wing bears over ten beak or tooth marks along the costa and at the base, none of which punctured the wing. The wing is whole and in good condition except the discal area where some scales have been rubbed off. Most of the markings beyond the discal line are clearly distinguishable, enabling it to be definitely placed as a wing of *M. cristata*.

I was unable to visit Shimla subsequently at a suitable season. This single record is of importance, even if the specimen was merely a straggler, since previous workers had not recorded it there. Therefore, it appears to have moved into the area recently, i.e. since Bell and Scott (1937) completed their studies in Mussoorie.

Moving from east to west, Mussoorie is roughly 100 km west of Bhimtal in Kumaon. Bhimtal is the westernmost site recorded for *cristata* (Smetacek 1994). This species has not been recorded from Mussoorie, but its appearance in Shimla (roughly 100 km northwest of Mussoorie and 200 km west of Bhimtal) suggests the existence of *cristata* in the area between Bhimtal and Shimla, probably around Mussoorie.

In Kumaon, *cristata* has been recorded in all the three ranges of the Himalaya. In the outermost range, where populations have been monitored for over two decades, it is a common, well-established species,

which can become very common if there are no forest fires and rainfall is heavy for several consecutive years.

The present record confirms that at least some Hawkmoths have extended their range westwards along the Himalaya during the second half of the twentieth century.

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PETER SMETACEK
Jones Estate, Bhimtal P.O.,
Nainital 263 136,
Uttaranchal, India.

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25. *PLEURONA FALCATA* WALKER, AN ADDITION TO THE NOCTUID FAUNA OF THE INDIAN MAINLAND

In the Indian sub-region, the species *Pleuroona falcata* Walker (Lepidoptera: Noctuidae) has been reported from Burma (Myanmar) and the Andaman Islands (Hampson 1894), but not from the Indian mainland. A single specimen was recorded by this author in the Kumaon Himalaya. This record extends the known distribution of this moth considerably westwards and northwards. It was previously known from tropical areas, but the present record is from c. 29° 20' 43" N.

The following is a description of the specimen:

Pleuroona Walker

1866. Cat. Lep. Het. Brit. Mus. Lond. 35: 564.

Pleuroona falcata Walker

1866. Cat. Lep. Het. Brit. Mus. Lond. 35: 564.

Material Examined: 1 ex. (female): 20.xi.1998, Jones Estate, Bhimtal, Kumaon 1,500 m at MV light. Leg. & coll. Peter Smetacek.

Forewing Length: 17 mm.

Expanse: 38 mm (Hampson 1894 & mihi).

Distribution: Burma, Andamans (Hampson 1894).

Remarks: This taxon should not be confused with *Chilkasa falcata* Swinhoe, which Hampson (1894) included under *Pleuroona*, proposing the new name *Pleuroona perhamata*, since *Pleuroona falcata* was preoccupied by the species being discussed here. The genus *Chilkasa* Swinhoe was subsequently resurrected in recent works such as Barlow (1982); hence *Chilkasa*

falcata is a valid name but does not refer to the species being discussed here.

The specimen is in perfect condition. It matches the description and Fig. 310 in Hampson (1894) except in the following points:

1. The ground colour on the *recto* surface is dark purplish-brown, not bright red-brown.
2. On the hindwing *recto*, the series of submarginal specks mentioned by Hampson are part of a crenulate line.

3. On the hindwing *verso*, the medial and postmedial lines are clear and sharply defined, not indistinct.

4. On the hindwing *verso*, the submarginal line is crenulate from the inner margin for two thirds of its length and the remaining third is straight to the costa.

The breeding status of this moth in the Bhimtal valley is uncertain, since this is the only specimen recorded in over two decades of monitoring moth populations at this site. However, it is certainly from a breeding population within Indian borders, since it is inconceivable that the present specimen could have passed its early stages in Myanmar and then traveled to Bhimtal. It is more likely that breeding populations of this moth will be found at low elevation along the Himalaya, at least as far west as Kumaon, particularly in the Terai and Bhabar zones, since this moth is primarily a tropical species.

It seems that the present specimen was a straggler from low elevation attempting to disperse the species. Its appearance in late November further indicates that